FACT SHEET FOR STATE WASTE DISCHARGE PERMIT ST-7316
FACILITY NAME: ARTISAN FINISHING SYSTEMS, INC.

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INTRODUCTION

This fact sheet is a companion document to the draft State Waste Discharge Permit No. ST-7316. The Department of Ecology (the Department) is proposing to issue this permit, which will allow discharge of wastewater to the City of Marysville POTW. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.160) requires that a permit be issued before discharge of wastewater to waters of the state is allowed. This statute includes commercial or industrial discharges to sewerage systems operated by municipalities or public entities which discharge into public waters of the state. Regulations adopted by the state include procedures for issuing permits and establish requirements which are to be included in the permit (Chapter 173-216 WAC).

GENERAL INFORMATION	
Applicant	Artisan Finishing Systems, Inc.
Facility Name and Address	Artisan Finishing Systems, Inc. 14219 Smokey Point Boulevard, #6 Marysville, WA 98271-8906
Type of Facility	Chromate Conversion Coating (Metal Finishing) Categorical
Facility Discharge Location	Latitude: 48° 07' 36" N Longitude: 122° 10' 56" W
Treatment Plant Receiving Discharge	City of Marysville POTW (WA-002249-7)
Contact at Facility	Name: Paula Delys Telephone #: (360) 658-0686
Responsible Official	Name: Paula Delys or Gary E. Holland Address: Artisan Finishing Systems, Inc. 14219 Smokey Point Boulevard, #6 Marysville, WA 98271-8906 Telephone No.: (360) 658-0686

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

Artisan Finishing is engaged in the chromate conversion coating and painting of aluminum parts. The parts coating is a predominantly architectural member such as door frames, window frames, columns, and railings.

INDUSTRIAL PROCESSES

The following steps occur in the **metal finishing** dip line:

1.) Part is dipped in alkaline cleaning solution.

2.) Part is dipped in an etch solution followed by a running water rinse.

3.) Part is dipped in a desmut solution followed by a running water rinse.

4.) Part is dipped in a chromium phosphate solution followed by a dead rinse.

Water usage typically varies between 2000 and 5000 gallons per day. The greater part of the water usage is used for rinsing in the alkaline cleaner and deox portion of the line. A smaller portion of the water is used for rinsing in the two dead rinses used in the chromate conversion portion of the line. The second (less concentrated) dead rinse is recycled back into the first (more concentrated) dead rinse tank. When the more concentrated dead rinse reaches a specified conductivity or total dissolved solids level, the rinse water, or a portion of it, is sent to the chrome treatment tank.

In addition to the above steps, an essentially dry (no process wastewater discharge) powder coating/painting process is also carried out at the plant. The steps in the powder coating/painting process are described below:

1.) The part is preheated and dried.

2.) A prime coat of paint is applied, followed by a color coat, and finally a clear coat.

3.) The part is baked in an oven, allowed to cool, and offloaded from the trolley line.

TREATMENT PROCESSES

The metal finishing process results in wastewater from the rinse processes. The alkaline cleaning, etch, and desmut lines result in rinse wastewater with environmentally insignificant metal content, and are treated for pH compliance-only.

Following the chromium-phosphate step, the parts are dipped in a dead rinse. Quality control specifications have been established for the maximum strength of the rinse. Following immersion in the high strength dead rinse, the part is immersed in the dilute rinse tank. The discharge from the live rinse contains environmentally insignificant amounts of heavy metals and is treated for pH adjustment-only.

The concentrated chromium rinse tank is periodically discharged to a high strength chromium rinse storage/treatment tank. pH adjustment is carried out followed by addition of sodium metabisulfite in order to reduce the hexavalent chromium ions to the trivalent form. Following the chromium reduction process, the water in the chromium rinse storage/treatment tank is pH adjusted and polymers are added to aid in the precipitation of chromium ions. Following settling of the chromium ions, the tank contents are again pH adjusted, and the supernatant is discharged to the sanitary sewer. Treatment of the concentrated chromium-bearing rinsewater typically occurs several times per year. The treated wastewater is then discharged to the sanitary sewer.

PERMIT STATUS

The previous permit for this facility was issued on February 15, 1996, and expired on June 30, 2000. An application for permit renewal was submitted to the Department on April 12, 2000. The Department issued a Notice of Temporary State Waste Discharge Permit letter on June 12, 2000. The letter stated that the temporary permit would become effective July 1, 2000.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility last received a compliance inspection with sampling on May 25, 2000. During the history of the previous permit, the Permittee has remained in compliance based on Discharge Monitoring Reports (DMRs) and other reports submitted to the Department and inspections conducted by the Department.

SEPA COMPLIANCE

This plant complied with the SEPA process at the time the permit was originally issued. As no new construction or permitting is being undertaken, the Permittee is not required to complete a SEPA checklist for re-issuance of this permit.

PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be based on the technology available to treat the pollutants (technology-based) or be based on the effects of the pollutants to the POTW (local limits). Wastewater must be treated using all known, available, and reasonable treatment (AKART) and not interfere with the operation of the POTW.

The more stringent of the local limits-based or technology-based limits are applied to each of the parameters of concern. Each of these types of limits is described in more detail below.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

All waste discharge permits issued by the Department must specify conditions requiring available and reasonable methods of prevention, control, and treatment of discharges to waters of the state (WAC 173-216-110). Existing federal categorical limitations for this facility are found under 40 CFR Part 433 under Pretreatment Standards for New Sources. The federal categorical limitations are considered to be consistent with state AKART requirements. The existing permit contains limitations for metals and TTO's based on federal categorical standards. These

limitations are shown in the first two data columns in the table in the Comparison of Limitations table below. These limitations are retained for the interim limitations in the proposed permit. These limitations are also maintained in the final limitations in the proposed permit in those cases in which the categorical limitations are at least as stringent as the local limitations.

EFFLUENT LIMITATIONS BASED ON LOCAL LIMITS

In order to protect the City of Marysville POTW from pass-through, interference, concentrations of toxic chemicals that would impair beneficial or designated uses of sludge, or potentially hazardous exposure levels, limitations for certain parameters have been established. These limitations are based on local limits established by the City of Marysville and codified in ordinance. The local limits were applied in the final limitations in the proposed permit in those cases in which the local limitations were more stringent than categorical limitations. Limits based on the local limitations are shown in bold in the final limitations data columns in the table appearing in the Comparison of Limitations section below. An interim period to achieve compliance with the more stringent local limits has been provided in the proposal permit.

Pollutant concentrations in the proposed discharge with technology-based controls in place are not expected to cause problems at the receiving POTW such as interference, pass-through, hazardous exposure to POTW workers, or unacceptable pollutant levels in the POTW's sludge.

COMPARISON OF LIMITATIONS WITH THE EXISTING PERMIT ISSUED FEBRUARY 15, 1996

The limitations appearing in the existing permit columns below will also appear as the interim limitations in the proposed permit. The limitations appearing in the final limitations columns in the table below are based on the most stringent of local limitations and categorical limitations. The limitations based on local limits are marked in bold.

Pollutant Parameter	Daily Max, Existing Permit	Monthly Avg, Existing Permit	Daily Max, Proposed Permit Final	Monthly Average, Proposed Permit Final
Flow, gpd	5900	N/A	5900	N/A
Cyanide, mg/L	1.20	0.65	1.20	0.65
Copper, mg/L	3.38	2.07	**0.5**	**0.5**
Nickel, mg/L	3.98	2.38	**1.48**	**1.48**
Chromium, mg/L	2.77	1.71	**1.47**	**1.47**
Zinc, mg/L	2.61	1.48	**1.67**	**1.48**
Lead, mg/L	0.69	0.43	**0.52**	0.43
Cadmium, mg/L	0.11	0.07	0.11	0.07
Silver, mg/L	0.43	0.24	0.43	0.24
TTO, mg/L	2.13	N/A	2.13	N/A
pH, std units	Not outside the range of 6.0 to 9.0		Not outside the range of 6.0 to 9.0	
BOD5, mg/L	**300**	N/A	**300**	N/A
TSS, mg/L	**350**	N/A	**350**	N/A

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, and that effluent limitations are being achieved (WAC 173-216-110).

The monitoring schedule is detailed in the proposed permit under Conditions S1 and S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring. As chromium is the most likely metal to be present in environmentally significant quantities, monitoring is required on a one-time per month basis. Monitoring of two times per year is required for the other parameters because USEPA Region X has determined that self monitoring for all categorically regulated parameters must be performed at least two times per year.

No monitoring is required for BOD_5 or TSS in this permit because this plant is extremely unlikely to discharge these pollutants in concentrations exceeding the limitations set forth in the permit. The limitations were included in the permit in order to reflect the fact that the City of Marysville does have limitations for these parameters.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges [WAC 273-216-110 and 40 CFR 403.12 (e), (g), and (h)].

OPERATIONS AND MAINTENANCE

The proposed permit contains condition S5 as authorized under Chapter 173-240-150 WAC and Chapter 173-216-110 WAC. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

PROHIBITED DISCHARGES

Certain pollutants are prohibited from being discharged to the POTW. These include substances which cause pass-through or interference, pollutants which may cause damage to the POTW or harm to the POTW workers (Chapter 173-216 WAC), and the discharge of designated dangerous wastes not authorized by this permit (Chapter 173-303 WAC).

DILUTION PROHIBITED

The Permittee is prohibited from diluting its effluent as a partial or complete substitute for adequate treatment to achieve compliance with permit limitations.

SOLID WASTE PLAN

The Department has determined that the Permittee has a potential to cause pollution of the waters of the state from leachate of solid waste. This proposed permit requires, under authority of RCW 90.48.080, that the Permittee maintain a current Solid Waste Plan to prevent solid waste from causing pollution of waters of the state.

NON-ROUTINE AND UNANTICIPATED DISCHARGES

Occasionally, this facility may generate wastewater which is not characterized in their permit application, because it is not a routine discharge and was not anticipated at the time of application. These typically are waters used to pressure test storage tanks or fire water systems or leaks from drinking water systems. These are typically clean wastewaters but may be contaminated with pollutants. The permit contains an authorization for non-routine and unanticipated discharges. The permit requires a characterization of these wastewaters for pollutants and examination of the opportunities for reuse. Depending on the nature and extent of pollutants in this wastewater and opportunities for reuse, Ecology may authorize a direct discharge via the process wastewater outfall or through a stormwater outfall for clean water, require the wastewater to be placed through the facilities wastewater treatment process, or require the water to be reused.

SPILL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080. The proposed permit requires the Permittee to maintain a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed permit requires the Permittee to update this plan as necessary and submit it to the Department.

SLUG DISCHARGE CONTROL PLAN

The Department has determined that the Permittee has the potential for a batch discharge or a spill that could adversely effect the POTW; therefore, a Slug Discharge Control Plan is required [40 CFR 403.8 (f)]. Therefore, the proposed permit contains a requirement for the Permittee to submit a Slug Discharge Control Plan to the Department. The permit also contains the requirement that the Permittee periodically evaluate the adequacy of its slug plan. The proposed permit requires that the Permittee submit any such update to the Department within thirty (30) days of their adoption.

GENERAL CONDITIONS

General Conditions are based directly on state laws and regulations and have been standardized for all industrial waste discharge to POTW permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending, or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes, or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the Permittee to control production or wastewater discharge in order to maintain compliance with the permit. Condition G10 prohibits the reintroduction of removed pollutants into the effluent stream for discharge. Condition G11 requires the payment of permit fees. Condition G12 describes the penalties for violating permit conditions.

PUBLIC NOTIFICATION OF NONCOMPLIANCE

A list of all industrial users which were in significant noncompliance with Pretreatment Standards or Requirements during any of the previous four quarters may be annually published by the Department in a local newspaper. Accordingly, the Permittee is apprised that noncompliance with this permit may result in publication of the noncompliance.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics. The Department proposes that the permit be issued for such a period as to expire on June 30, 2004. This expiration date will facilitate re-issuance of the permit in a manner consistent with the Department's watershed-based activities schedule. Permits for facilities discharging to the Snohomish Basin are scheduled for re-issuance in state fiscal year 2004. State fiscal year 2004 begins July 1, 2003, and ends June 30, 2004.

APPENDIX

APPENDIX A—GLOSSARY

Ammonia—Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes toeutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation—The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs—Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural, and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD_5—Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD_5 is used in modeling to measure the reduction of dissolved oxygen in a-receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass—The intentional diversion of waste streams from any portion of the collection or treatment facility.

Categorical Pretreatment Standards—National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories.

Compliance Inspection - Without Sampling—A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling—A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample—A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).

Construction Activity—Clearing, grading, excavation, and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Continuous Monitoring—Uninterrupted, unless otherwise noted in the permit.

Engineering Report—A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Grab Sample—A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial User—A discharger of wastewater to the sanitary sewer which is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

Industrial Wastewater—Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Interference—A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and

Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) [including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA], sludge regulations appearing in 40 CFR Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research, and Sanctuaries Act.

Local Limits—Specific prohibitions or limits on pollutants or pollutant parameters developed by a POTW.

Maximum Daily Discharge Limitation—The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)—The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Pass-through—A discharge which exits the POTW into waters of the-State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of State water quality standards.

pH—The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Potential Significant Industrial User—A potential significant industrial user is defined as an Industrial User which does not meet the criteria for a Significant Industrial User, but which discharges wastewater meeting one or more of the following criteria:

a. Exceeds 0.5 % of treatment plant design capacity criteria and discharges <25,000 gallons per day; or

b. Is a member of a group of similar industrial users which, taken together, have the potential to cause pass through or interference at the POTW (e.g., facilities which develop photographic film or paper, and car washes).

The Department may determine that a discharger initially classified as a potential significant industrial user should be managed as a significant industrial user.

Quantitation Level (QL)—A calculated value five times the MDL (method detection level).

Significant Industrial User (SIU)—

1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; and

2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, non-contact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement [in accordance with 40 CFR 403.8(f)(6)].

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

*The term "Control Authority" refers to the Washington State Department of Ecology in the case of non-delegated POTWs or to the POTW in the case of delegated POTWs.

Slug Discharge—Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge to the POTW. This may include any pollutant released at a flow rate which may cause interference with the POTW.

State Waters—Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater—That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based Effluent Limit—A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Coliform Bacteria—A microbiological test which detects and enumerates the total coliform group of bacteria in water samples.

Total Dissolved Solids—That portion of total solids in water or wastewater that passes through a specific filter.

Total Suspended Solids (TSS)—Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a-receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Water Quality-based Effluent Limit—A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.